DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-016086
Date Inspected: 09-Aug-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	N/a			**CWI Present:**	☐ Yes	☑ No	
Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Electrode to specification:	☐ Yes	☐ No	☑ N/A	**Weld Procedures Followed:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☐ Yes	☐ No	☑ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☐ Yes	☐ No	☑ N/A	**Approved WPS:**	☐ Yes	☐ No	☑ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 9AE

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Cross Beam and Bike Path side at Panel Points (PP) 72 and PP 73 for Segment 9AE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00448 dated August 09, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220011 and the final torque value established was 457 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220013 and the final torque value established was 433 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220052 and the final torque value established was 463 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240013 and the final torque value established was 540 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The manual torque wrench used to verify tension was S/N XO2-779.

Segment 9BE

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Cross Beam and Bike Path side at Panel Points (PP) 74, PP 75 and PP 76 for Segment 9BE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00448 dated August 09, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220011 and the final torque value established was 457 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220013 and the final torque value established was 433 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220052 and the final torque value established was 463 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240013 and the final torque value established was 540 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The manual torque wrench used to verify tension was S/N XO2-779. Please reference the pictures attached for more comprehensive details.

Segment 9CE

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Cross Beam and Bike Path side at Panel Points (PP) 77, PP 78 and PP 79 for Segment 9CE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00448 dated August 09, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220011 and the final torque value established was 457 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220013 and the final torque value established was 433 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220052 and the final torque value established was 463 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240013 and the final torque value established was 540 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The manual torque wrench used to verify tension was S/N XO2-779.

Segment 9DE

This Quality Assurance (QA) Inspector witnessed the final bolt tension verification on bolts connecting the Lower Chevron and Upper Chevron at Cross Beam and Bike Path side at Panel Points (PP) 80, PP 81 and PP 82 for Segment 9DE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00448 dated August 09, 2010.

The bolt sizes used were M22 x 70 RC Lot # DHGM220009 and the final torque value established was 447 N-m.

The bolt sizes used were M22 x 75 RC Lot# DHGM220034 and the final torque value established was 453 N-m.

The bolt sizes used were M22 x 80 RC Lot# DHGM220034 and the final torque value established was 460 N-m.

The manual torque wrench used to verify tension was S/N XO2-779.

Segment 9EE

This Quality Assurance (QA) Inspector witnessed the final bolt tension verification on bolts connecting the Lower Chevron and Upper Chevron at Cross Beam and Bike Path side at Panel Points (PP) 83, PP 84 and PP 85 for Segment 9EE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00448 dated August 09, 2010.

The bolt sizes used were M22 x 70 RC Lot # DHGM220009 and the final torque value established was 447 N-m.

The bolt sizes used were M22 x 75 RC Lot# DHGM220034 and the final torque value established was 453 N-m.

The bolt sizes used were M22 x 80 RC Lot# DHGM220034 and the final torque value established was 460 N-m.

The manual torque wrench used to verify tension was S/N XO2-779. Please reference the pictures attached for

more comprehensive details.

Segment 9BW

This QA Inspector performed Dimension Control Inspection for the Segment 9BW from Panel Point (PP) 73.25 to PP 76.25 at the following locations:

The skin flatness was verified and measured across the longitudinal butt weld at Side Panel (SP) to Corner Assembly (CA) at the Cross Beam (CB) and Counter Weight (CW) side from Panel Point (PP) 73.25 to PP 76.25. The QA Inspector measured the skin flatness using 600mm Straight Edge.

The skin flatness was verified and measured across the longitudinal butt weld at Deck Panel (DP) to Corner Assembly (CA) at the Cross Beam (CB) and Counter Weight (CW) side from Panel Point (PP) 73.25 to PP 76.25. The QA Inspector measured the skin flatness using 600mm Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9AE

This QA Inspector performed Dimension Control Inspection for the Segment 9AE at the following locations:

The reentrant corner at Floor Beam vertical flange radius were verified and measured at Panel Points (PP) 72 and PP 73 at the Cross Beam (CB) and Bike Path (BK) side, east and west side of Floor Beam. The QA Inspector measured the radius of reentrant corner using a pre-cut 25mm and 50mm template.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9DE

This QA Inspector performed Dimension Control Inspection for the Segment 9DE at the following locations:

The reentrant corner at Floor Beam vertical flange radius were verified and measured at Panel Points (PP) 80, PP 81 and PP 82 at the Cross Beam (CB) and Bike Path (BK) side, east and west side of Floor Beam. The QA Inspector measured the radius of reentrant corner using a pre-cut 25mm and 50mm template.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 11CE

This QA Inspector performed Dimension Control Inspection along with ABF QA personnel for the Segment 11CE from Panel Point (PP) 102 at the following locations after heat straightening the out of tolerance area:

The Deck Panel to the Deck Panel Diaphragm plate plumbness was verified and measured from east and west side of the Deck Panel Diaphragm at Panel Points (PP) 102. The QA Inspector measured the plumbness using carpenter square.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

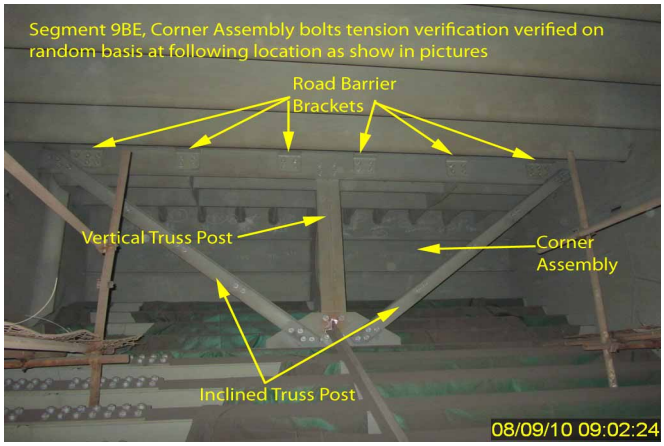
Segment 11BE

This QA Inspector performed Dimension Control Inspection along with ABF QA personnel for the Segment 11BE from Panel Point (PP) 99 at the following locations after heat straightening the out of tolerance area:

The Deck Panel to the Deck Panel Diaphragm plate plumbness was verified and measured from east and west side of the Deck Panel Diaphragm at Panel Points (PP) 99. The QA Inspector measured the plumbness using carpenter square.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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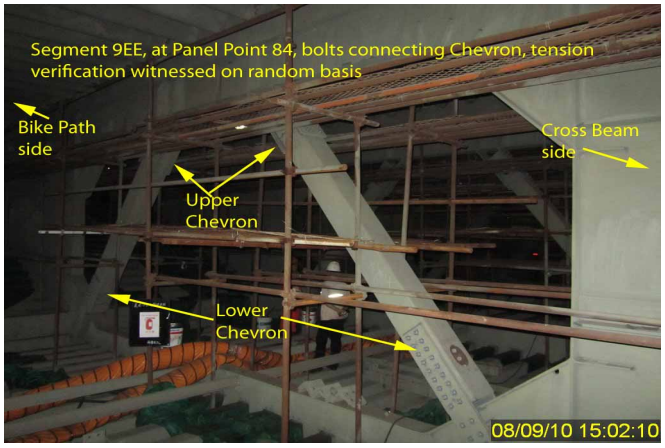

Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer